Chapter VII

PUBLIC FACILITIES

CHAPTER VII - PUBLIC FACILITIES

This chapter examines the impact that future development will have on public facilities and services including water, sewerage, storm draining, fire protection and utilities. A long range outlook for the water and sewerage facilities is necessary for the orderly redevelopment of the Rockville Pike Corridor.

EXISTING CONDITIONS

Water Distribution System

Rockville Pike is served by an extensive system of water mains varying in size from 8" to 16" in diameter. These mains provide public, potable water supply for both fire protection and domestic purposes. Most of the area between Richard Montgomery Drive and Halpine Road is served by dual, parallel systems. A transmission main of 12" diameter begins at Edmonston Drive and extends southward to Halpine Road where it increases in diameter to 16" at the City limit. At this point the City's system connects with the Washington Suburban Sanitary Commission's (WSSC) system by a pump system capable of delivering one million gallons per day. This pump is utilized for emergency purposes only and draws from or pumps to an elevated storage tank on Talbott Street which has a capacity of one-million gallons.

In 1985, due to reduced capacity from pipeline deterioration, the above described 12" main was cleaned and relined. This effectively doubled the carrying capacity and thereby improved the fire protection along Rockville Pike and in adjacent areas. Citywide water system analysis conducted in 1971 and updated in 1979 recommended several improvements. In addition to the above, a new 24" and 20" diameter system will be extended from Seven Locks Road to Rockville Pike. A new 16" diameter main will be installed from above the 20" main at Edmonston Drive to the Talbott Street water storage tank. A control device providing improved service will be installed on the reservoir.

Sanitary Sewerage System

In 1984, the Engineering Division, working with the City sewer maintenance division and the Infiltration/Inflow Division of the WSSC, investigated the existing piping works conveying sewage from the Rockville Pike area to the Rock Creek transmission main. This system has been created on a piecemeal basis over the years and, for the most part, is more than 30 years of age. Considering the age, the system, which is composed primarily of clay pipe and brick channel manholes, appears to be in reasonably good condition.

The Rockville Pike Corridor lies in two drainage basins. The west side of the Pike is in the Cabin John drainage basin. Both systems ultimately extend to and connect with the WSSC system for conveyance to the Blue Plains wastewater treatment plant operated by the District of Columbia. The pipes along the corridor vary in diameter. Beginning at Edmonston Drive an 8" diameter pipe exists and as it progresses south, increases to a 10" diameter. Behind Alsace Lane it connects to a newly installed 12" diameter system paralleling the Twinbrook Stream to the Twinbrook Park. At this point, it connects to an older 12" diameter system and extends to the WSSC system at Twinbrook

Several improvement projects have been proposed and implemented over the past several years. Construction of a major relief line along the Twinbrook stream (mentioned above) and two projects along the Rockville Pike corridor were accomplished during 1986.

The City has a contract with WSSC for 9.31 million gallons per day of capacity at the Blue Plains Sewage Treatment Plant, which is adequate to accommodate the City's ultimate build-out according to the 1970 Master Plan.

Storm Water Management

The Rockville Pike Corridor is served by an extensive system of enclosed storm drains. Storm water management facilities are located in the Rock Creek drainage shed and the Cabin John drainage shed. Additional facilities are also authorized in both drainage sheds. Major storm drainage piping is in place to provide extensions, if necessary.

The City has a strong stormwater management ordinance in place that provides an effective tool for mitigating the adverse impacts of urbanization on stream habitat or increased pollutant export. The City's law includes a series of Best Management Practices (BMPs) that helps remove urban pollutants and protect downstream aquatic life. These practices include extended detention, retention or infiltration of urban stormwater to enhance pollutant removal and provide additional stormwater management.

Other Utilities

The study area is served the Potomac Electric Power Company (PEPCO) and the Washington Gas Light Company (WGL). PEPCO facilities in the study area include a substation at Jefferson Street and Congressional Lane, above-ground transmission lines and the network of distribution lines.

Fire Protection

Fire protection is provided by the Rockville Volunteer Fire Department. There are three fire stations serving Rockville and one is located within the study area, on Rollins Avenue. This station (#23) houses two pumpers, one ladder truck, and one medic unit. Eight firefighters man the facility during the weekday daylight hours. Five firefighters are on duty during nights and weekends, and volunteers supplement the capabilities during these hours.

Police Protection

The study area, as well as the rest of the city, is served by both the Rockville and Montgomery County police forces.

RECOMMENDATIONS

This section includes long range recommendations that will be necessary to provide public facilities to future development in the Pike corridor. These recommendations are based on an analysis of existing conditions and applicable City policies and procedures. No recommendations have been made in areas where existing conditions are adequate to handle the level of development proposed in this Plan.

Water Distribution System

The land use system proposed in this plan will not have a significant impact on any planned or needed improvements to the water distribution system. Improvements are anticipated to the system as a regular function of upkeep and maintenance, including the cleaning and cement lining of the existing mains. New developments on the Pike may influence the rate of construction of new mains but is not likely to require additional construction that is not already planned by the City.

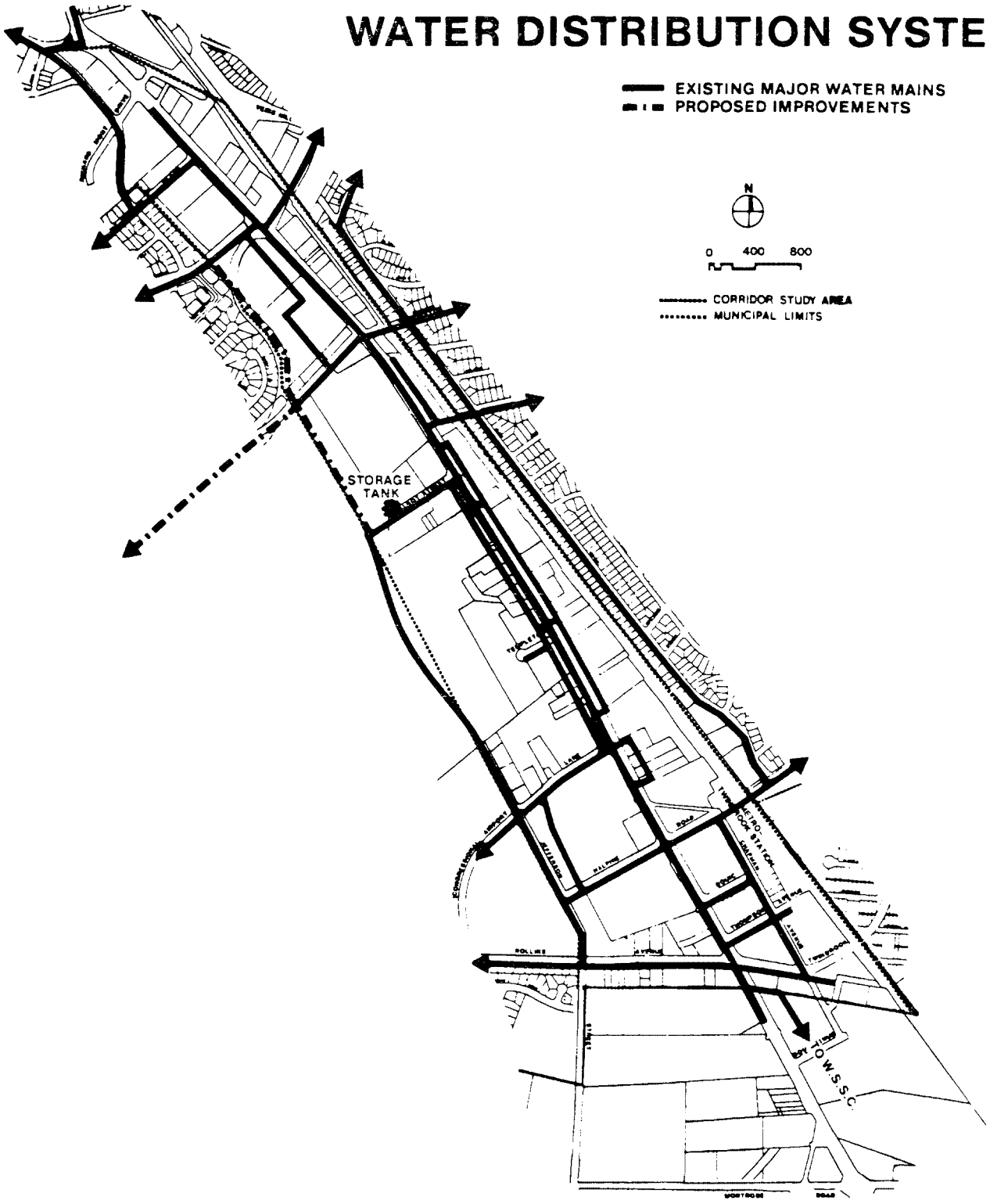
Sanitary Sewerage System

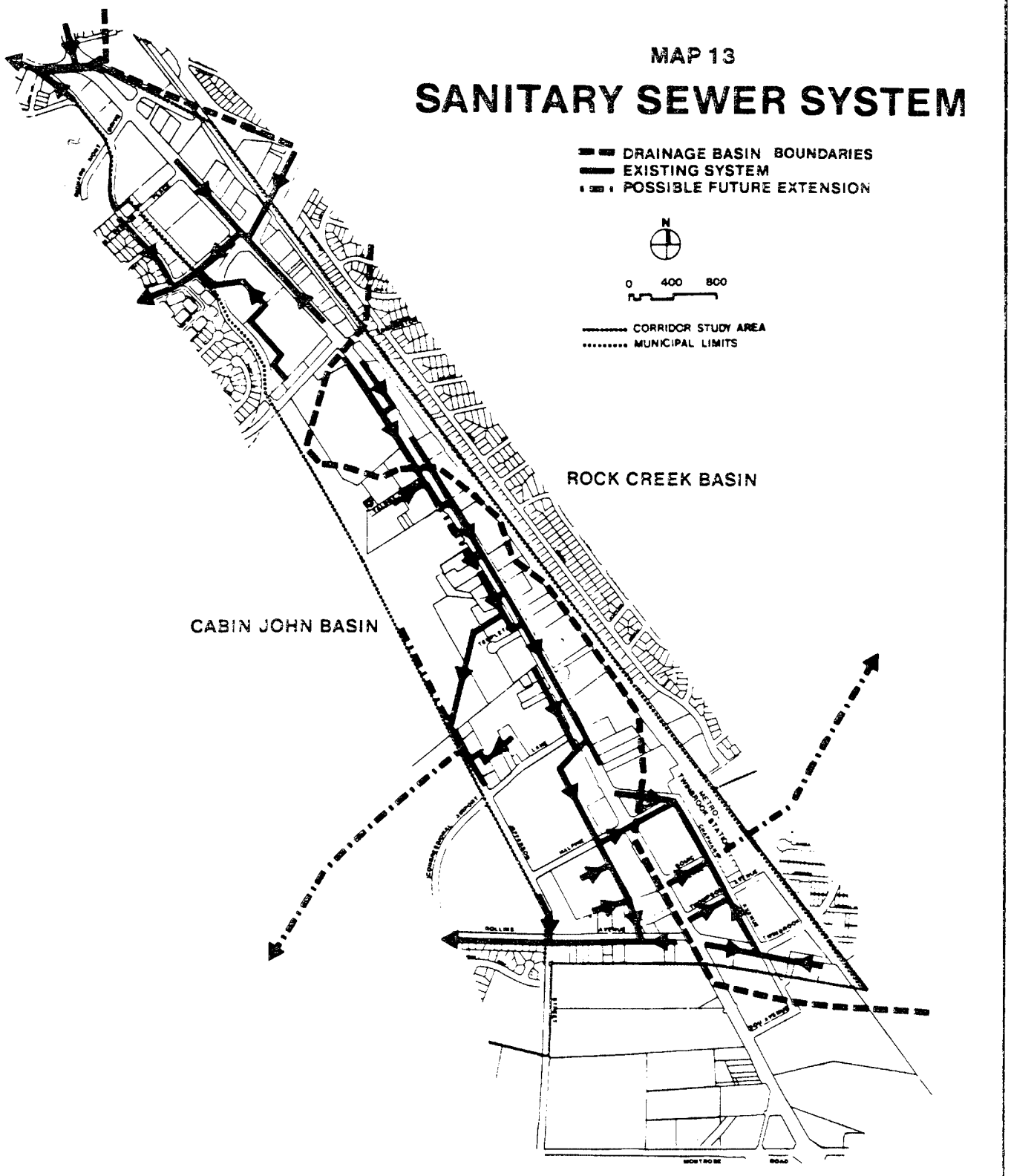
The sewer system serving the Rockville Pike Corridor may not contain adequate capacity to accommodate the development currently projected. Several new mains may be required, and the scheduling, configuration and sizing of these mains will be dependent on the extent and location of the specific development.

To accommodate the planned growth, a major new outfall system must be constructed. Based on the current scenario, this may require construction of an outfall between Congressional Plaza Shopping Center and Alsace Lane. Precise development patterns may allow a less expensive alteration, and this will be examined as the area development progresses.

MAP 12

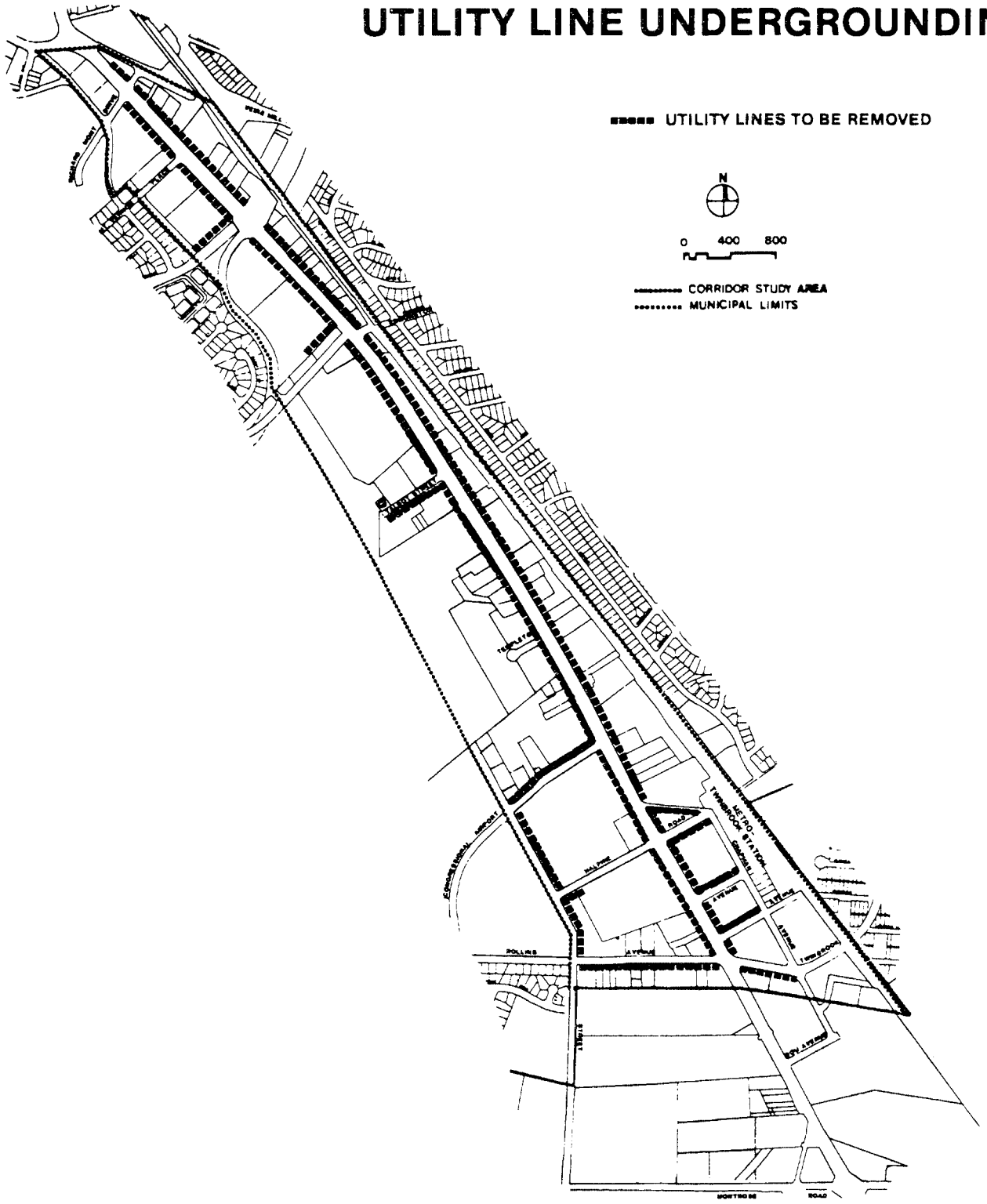
WATER DISTRIBUTION SYSTEM




MAP 13
SANITARY SEWER SYSTEM
DRAINAGE BASIN BOUNDARIES
EXISTING SYSTEM
POSSIBLE FUTURE EXTENSION
N
0 400 800
CORRIDOR STUDY AREA
MUNICIPAL LIMITS
ROCK CREEK BASIN
CABIN JOHN BASIN

MAP 14

UTILITY LINE UNDERGROUNDING



At this time, it appears that a relief line will be required in the Rock Creek system for the entire distance between Chapman Avenue at the Metro station and the WSSC system at Veirs Mill Road, except for the Twinbrook stream section, which has already been completed. In addition, a new system will be required between Rockville Pike at Congressional Lane and the WSSC System at Montrose Woods subdivision.

Because Rockville Pike is situated along a ridge line separating the Rock Creek from the Cabin John basins, it is possible to divert sewage flow from one system to the other. Depending on development patterns and schedules, it may be possible to use a diversion sewer to avoid the need to replace a costly section of sewer main between Rockville Pike at Halpine Road and Alsace Lane. As development of the corridor progresses, the Public Works Department should pursue this objective to, if possible, limit the corridor's sewer system reconstruction to a single outfall in the Cabin John drainage basin and thereby realize substantial cost savings.

The WSSC systems serving the Rock Creek and Cabin John basins will also need to be supplemented as part of the pending WSSC study for the Cabin John Basin.

Storm Water Management

In those areas presently underdeveloped, sufficient space will be available to accommodate on-site retention, if necessary. If piping extensions are required to tie development into existing storm water management ponds, the developers of the property will be responsible for their provision.

Private Utilities

All aerial utility lines along the Pike and nearby streets should be relocated underground as a safety measure and to enhance the visual appearance of the Pike. The following map shows the locations from which utility lines will be removed.

Fire Protection

Because of the increase in development along the Pike, a ladder truck with a 100' ladder should be acquired to replace the 75' ladder truck to provide fire protection for the high rise residential units proposed in the land use plan.

CONCLUSION

The public facility that is most likely to restrict development in the corridor is the road network. The public facilities identified in this section can be augmented in order to accommodate new development. The implementation of required improvements will be through the capital improvements program and developer constructed improvements.

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